

M.H

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Assistant Commissioner for Patents
United States Patent and Trademark
Office
Box PCT
Washington, D.C.20231
ÉTATS-UNIS D'AMÉRIQUE

in its capacity as elected Office

Date of mailing (day/month/year)

16 February 2000 (16.02.00)

International application No.

PCT/GB99/01094

Applicant's or agent's file reference

BEC/29431-7

International filing date (day/month/year)

09 April 1999 (09.04.99)

Priority date (day/month/year)

26 May 1998 (26.05.98)

Applicant

VON SPRECKEISEN, Henning et al

1. The designated Office is hereby notified of its election made:



in the demand filed with the International Preliminary Examining Authority on:

16 December 1999 (16.12.99)



in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Olivia RANAIVOJAONA

Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

COOKSON, Barbara, Elizabeth
Nabarro Nathanson
Lacon House
Theobald's House
London WC1X 8RW
ROYAUME-UNI

Date of mailing (day/month/year)

21 September 2000 (21.09.00)

Applicant's or agent's file reference

BEC/29431-7

IMPORTANT NOTIFICATION

International application No.

PCT/GB99/01094

International filing date (day/month/year)

09 April 1999 (09.04.99)

1. The following indications appeared on record concerning:

☐

the applicant

☐

the inventor

☒

the agent

☐

the common representative

Name and Address

COOKSON, Barbara, Elizabeth
Field Fisher Waterhouse
41 Vine Street
London EC3N 2AA
United Kingdom

State of Nationality

State of Residence

Telephone No.

44 171 481 4841

Facsimile No.

44 171 488 0084

Teleprinter No.

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

☐

the person

☐

the name

☒

the address

☐

the nationality

☐

the residence

Name and Address

COOKSON, Barbara, Elizabeth
Nabarro Nathanson
Lacon House
Theobald's Road
London WC1X 8RW
United Kingdom

State of Nationality

State of Residence

Telephone No.

020 7524 6000

Facsimile No.

020 7524 6524

Teleprinter No.

3. Further observations, if necessary:

4. A copy of this notification has been sent to:

☒

the receiving Office

☐

the International Searching Authority

☐

the International Preliminary Examining Authority

☐

the designated Offices concerned

☒

the elected Offices concerned

☐

other:

The International Bureau of WIPO
34, chemin des Colombettes
1211 Geneva 20, Switzerland

Facsimile No.: (41-22) 740.14.35

Authorized officer

Ingrid Aulich

Telephone No.: (41-22) 338.83.38



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification⁶:

B65D 51/20, 47/10, 8/18

A3

(11) International Publication Number:

WO 99/61337

(43) International Publication Date:

2 December 1999 (02.12.99)

(21) International Application Number: PCT/GB99/01094

(22) International Filing Date: 9 April 1999 (09.04.99)

(30) Priority Data:

9811308.7	26 May 1998 (26.05.98)	GB
PCT/GB98/03433	13 November 1998 (13.11.98)	GB

(71) Applicant (for all designated States except US): SPRECK-ELSEN McGEOUGH LIMITED [GB/GB]; Sundial House, High Street, Horsell, Woking, Surrey GU21 4SU (GB).

(72) Inventors; and

(75) Inventors/Applicants (for US only): VON SPRECKEISEN, Henning [DE/GB]; Little Gawton, Horsell Vale, Woking, Surrey GU21 4QU (GB). McGEOUGH, Peter, Michael [IE/GB]; 23 Summerlands Avenue, Acton, London W3 6EW (GB).

(74) Agent: COOKSON, Barbara, Elizabeth; Field Fisher Waterhouse, 41 Vine Street, London EC3N 2AA (GB).

(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

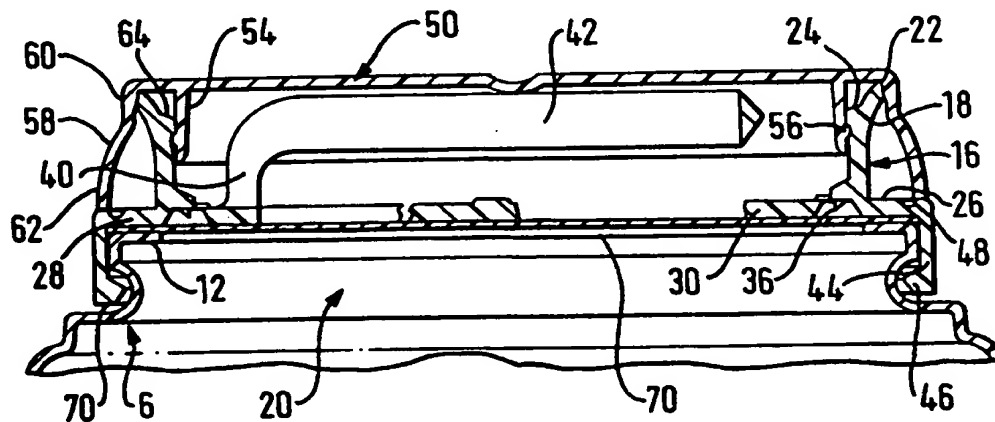
Published

With international search report.

(88) Date of publication of the international search report:

24 February 2000 (24.02.00)

(54) Title: THIN-WALLED PLASTICS BOTTLE, CLOSURE AND BOTTLING PROCESS



(57) Abstract

A bottle is formed from a moulded plastics body and an injection moulded neck and cap assembly which can be fused to the body after the body has been filled with a fluid. The body may be provided with a relatively wide mouth to enhance the filling speed. The bottle is particularly suitable for blow moulding in a plant adjacent to a dairy where it will be subsequently filled with a fluid and fused to a pre-sealed neck and cap assembly in a single continuous operation. A foil (70) is interposed between the body and the neck and cap assembly. The neck comprises a base (20) fitted to the body with a removable annular flange (30) connected to a pull ring (42) and secured to the foil (70). A frangible region (32) separates the removable annular flange (30) from the base (20). A plurality of depending teeth (36) each having a saw tooth profile inclined inwardly to a centre of the base are formed in the base adjacent to or in the frangible region (32) such that on removal of the pull ring (42) the foil (70) is torn by the teeth. The base may be provided with a weakened annular recess (48) that is concealed by a skirt (58) of a cap (50) when the closure is sealed. This recess (48) causes the base to break and the cap closure to be destroyed if any attempt is made to prise the base (20) from the mouth (6) of the bottle. This provides tamper evidence by destruction of the closure.

FOR THE PURPOSES OF INFORMATION ONLY

Codes used to identify States party to the PCT on the front pages of pamphlets publishing international applications under the PCT.

AL	Albania	ES	Spain	LS	Lesotho	SI	Slovenia
AM	Armenia	FI	Finland	LT	Lithuania	SK	Slovakia
AT	Austria	FR	France	LU	Luxembourg	SN	Senegal
AU	Australia	GA	Gabon	LV	Latvia	SZ	Swaziland
AZ	Azerbaijan	GB	United Kingdom	MC	Monaco	TD	Chad
BA	Bosnia and Herzegovina	GE	Georgia	MD	Republic of Moldova	TG	Togo
BB	Barbados	GH	Ghana	MG	Madagascar	TJ	Tajikistan
BE	Belgium	GN	Guinea	MK	The former Yugoslav Republic of Macedonia	TM	Turkmenistan
BF	Burkina Faso	GR	Greece	ML	Mali	TR	Turkey
BG	Bulgaria	HU	Hungary	MN	Mongolia	TT	Trinidad and Tobago
BJ	Benin	IE	Ireland	MR	Mauritania	UA	Ukraine
BR	Brazil	IL	Israel	MW	Malawi	UG	Uganda
BY	Belarus	IS	Iceland	MX	Mexico	US	United States of America
CA	Canada	IT	Italy	NE	Niger	UZ	Uzbekistan
CF	Central African Republic	JP	Japan	NL	Netherlands	VN	Viet Nam
CG	Congo	KE	Kenya	NO	Norway	YU	Yugoslavia
CH	Switzerland	KG	Kyrgyzstan	NZ	New Zealand	ZW	Zimbabwe
CI	Côte d'Ivoire	KP	Democratic People's Republic of Korea	PL	Poland		
CM	Cameroon	KR	Republic of Korea	PT	Portugal		
CN	China	KZ	Kazakstan	RO	Romania		
CU	Cuba	LC	Saint Lucia	RU	Russian Federation		
CZ	Czech Republic	LI	Liechtenstein	SD	Sudan		
DE	Germany	LK	Sri Lanka	SE	Sweden		
DK	Denmark	LR	Liberia	SG	Singapore		
EE	Estonia						

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/01094

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 B65D51/20 B65D47/10 B65D8/18

09/701057

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 6 B65D B29C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 4 840 289 A (FAIT ROGER J ET AL) 20 June 1989 (1989-06-20) column 4, line 22 - line 31 column 4, line 63 - column 5, line 7; figures 1-8	1
A	---	6,7
Y	US 5 135 702 A (EALES GEORGE E) 4 August 1992 (1992-08-04) column 1, line 26 - line 47	1
A	EP 0 126 575 A (COSDEN TECHNOLOGY) 28 November 1984 (1984-11-28) page 13, paragraph 2 - page 14, paragraph 1; figure 1	1
	--- -/--	



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

17 November 1999

Date of mailing of the international search report

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Spettel, J

INTERNATIONAL SEARCH REPORT

International Application No

PCT/GB 99/01094

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	EP 0 411 578 A (TERUMO CORP) 6 February 1991 (1991-02-06) column 5, paragraph 2; figure 8 ---	1
X	WO 96 39329 A (VALYI EMERY I) 12 December 1996 (1996-12-12) page 13, line 18 - line 27 page 14, line 25 -page 15, line 12 page 17, line 1 - line 19; figures 1-8	7,11
Y	---	8-10
A	---	6
Y	US 4 815 618 A (GACH PETER P) 28 March 1989 (1989-03-28) cited in the application the whole document	8
A	---	2,3,6
Y	US 4 699 286 A (NOLAN ROBERT L) 13 October 1987 (1987-10-13) column 1, paragraph 2; figures	9
A	---	7
Y	US 3 990 826 A (MARCUS PAUL) 9 November 1976 (1976-11-09) figures	10
A	---	7
A	US 5 297 696 A (BERNSTEIN LINDA A ET AL) 29 March 1994 (1994-03-29) figures 2-5	2,6
A	---	2,6,7
A	GB 2 108 464 A (CONTAINER CORP) 18 May 1983 (1983-05-18) cited in the application the whole document	2,6
A	---	2,6
A	WO 96 14249 A (CAPITOL SPOUTS INC) 17 May 1996 (1996-05-17) cited in the application figures -----	2,6

INTERNATIONAL SEARCH REPORT

Int. application No.
PCT/GB 99/01094

Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. Claims: 1, 7-13

Bottle composed of extrusion blow molded body and fused neck and cap assembly as well as bottling process

2. Claims: 2-6

Closure and bottle with specific opening arrangement composed of pellicle-perforating teeth arrangement

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/GB 99/01094

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4840289 A	20-06-1989	CA 1324328 A EP 0340949 A GR 90300100 T JP 2127245 A	16-11-1993 08-11-1989 30-12-1992 15-05-1990
US 5135702 A	04-08-1992	US 5135823 A US 5240788 A	04-08-1992 31-08-1993
EP 0126575 A	28-11-1984	FR 2551423 A IT 1177704 B JP 60034331 A	08-03-1985 26-08-1987 21-02-1985
EP 0411578 A	06-02-1991	JP 2929493 B JP 3063069 A JP 1874855 C JP 3063070 A JP 5087263 B AU 625186 B AU 6003890 A DE 69014255 D DE 69014255 T US 5054948 A	03-08-1999 19-03-1991 26-09-1994 19-03-1991 16-12-1993 02-07-1992 07-02-1991 05-01-1995 18-05-1995 08-10-1991
WO 9639329 A	12-12-1996	US 5661889 A AU 5880996 A US 5826739 A	02-09-1997 24-12-1996 27-10-1998
US 4815618 A	28-03-1989	NONE	
US 4699286 A	13-10-1987	US 4722448 A	02-02-1988
US 3990826 A	09-11-1976	NONE	
US 5297696 A	29-03-1994	US 5366114 A	22-11-1994
GB 2108464 A	18-05-1983	US 4359169 A CA 1174989 A DE 3231463 A FR 2511976 A JP 58082860 A	16-11-1982 25-09-1984 17-03-1983 04-03-1983 18-05-1983
WO 9614249 A	17-05-1996	AU 4102096 A US 5839627 A	31-05-1996 24-11-1998

mouth and defining a pour spout (18) and having a pull ring (42) coupled to a removable part (30) held within a base (20) of the neck which seats against an upper surface (12) of the mouth; and

a foil (70) interposed between the surface (12) and the base (20) and fused with both such that removal of the pull ring (42) and removable part (30) removes at least part of the foil (70) and opens the spout (18);

characterised in that the removable part comprises an annular flange (30) separated from a remainder of the base (20) by means of a frangible valley (32) defining a plurality of depending teeth (36) each having a saw tooth profile inclined inwardly to a centre of the base such that on removal of the pull ring the foil (70) is torn by the teeth (36).

7. A process for bottling fluid comprising the steps of:
extrusion blow moulding thin-walled bottle bodies having open mouths;
filling said bottle bodies;

fitting a neck and cap assembly having a base of the neck sized to correspond to the open mouth of the bottle body to each filled bottle body;
heat sealing the bottle bodies to the neck and cap assemblies.

8. A process as claimed in claim 7, wherein a foil is sealed to the base of the neck of the neck and cap assembly prior to delivery to a filling hall.

9. A process as claimed in claim 8, further comprises sterilising the foil prior to the fitting step.

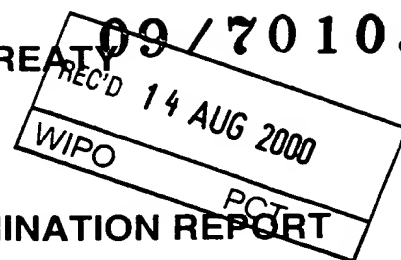
10. A process as claimed in claim 7, wherein the bottle bodies are blow moulded using a rotary machine having a series of moulds adapted to pass beneath a single die-head for the supply of a predetermined amount of plastics material to form a parison which is subsequently inflated to form said body.

11. A process as claimed in claim 10, wherein the bottle body leaving the mould is

750105M
09-20105M

passed directly to a filling station.

12. A bottle substantially as herein described with reference to the accompanying drawings.
 13. A process for bottling fluids substantially as herein described with reference to the accompanying drawings.
- 5



Applicant's or agent's file reference BEC/29431-7	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB99/01094	International filing date (day/month/year) 09/04/1999	Priority date (day/month/year) 26/05/1998
International Patent Classification (IPC) or national classification and IPC B65D51/20		
Applicant SPRECKELSEN McGEOUGH LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 5 sheets, including this cover sheet.

- ☒ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 1 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 16/12/1999	Date of completion of this report 10.08.2000
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Samwel, P Telephone No. +49 89 2399 2099 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB99/01094

I. Basis of the report

1. This report has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to the report since they do not contain amendments.*):

Description, pages:

1-18 as originally filed

Claims, No.:

1-5,6 (part) as originally filed

6 (part),7-10 as received on 19/07/2000 with letter of 17/07/2000

Claims, pages:

20 as received on 19/07/2000 with letter of 17/07/2000

Drawings, sheets:

1/4-4/4 as originally filed

2. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☒ the claims, Nos.: 11-13
☐ the drawings, sheets:

3. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB99/01094

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes:	Claims	2-10
	No:	Claims	1
Inventive step (IS)	Yes:	Claims	
	No:	Claims	2-10
Industrial applicability (IA)	Yes:	Claims	1-10
	No:	Claims	

2. Citations and explanations

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/01094

1) Extrusion blown bottles, even adapted to be connected to a neck and cap assembly are generally known in the art. Neck and cap assemblies as well. To connect neck and cap in such a way as to avoid leakage after filling the bottle is a standard procedure. The subject-matter of Claim 1 is therefore not considered as novel (Article 33(2)). Even if the claim would describe a bottle fused to a neck and cap assembly, the subject-matter of claim 1 can not be regarded as inventive. EP-A- 126 575 describes a container (which could be an extrusion blown bottle) with a separate top (which could be a neck and cap assembly).

2) Two new documents are introduced in the proceedings: DE-A- 43 40 553 (=D1) and EP-A- 0 755 871 (=D2) Article 33(6). D1 describes a closure having a body, wherein a foil is interposed between the body and the neck and cap assembly comprising a base fitted to the body, a removable annular flange secured to the foil and being separated from the base by a frangible region and a plurality of depending teeth each having a saw tooth profile such that the foil is torn by the teeth (see especially Figure 2). Hence the only difference between the subject-matter of claim 2 and D1 is the absence of a pull ring (although ref 20 might be considered as such) and the exact placing of the teeth. This however is a choice open to the engineer and can not be considered as involving an inventive step Rule 33(1). The wording "use for" does not imply a technical feature and has no limiting effect.

3) A weakened annular recess within the area covered by the cap, the exact arrangement of the pull ring or the use of coated aluminium foil is either known perse or an obvious design measure not justifying an inventive step either. Therefore the subject-matter of claims 3-5 can not be used together with the subject-matter of claim 1, to form an allowable claim.

4) D2 is a comparable closure but for containers open at the top side. Therefore the use of such a closure for other containers as the one mentioned in WO 96/14249 is known in the art as well. Although a bottle is not specifically mentioned in D2, cans are. The subject-matter of claim 6 is therefore not considered as inventive either.

5) The process of filling bottles with closures as claimed in claim 7 is one of a limited number of possible processes. The choice made can not be considered as inventive

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/01094

either. The same applies for the subject-matter of claim 8-11. Therefore claims 7 -11 are not allowable because they lack an inventive step.